

To: Garcia, David[Garcia.David@epa.gov]
From: Kirkland, Robert
Sent: Fri 8/7/2015 1:32:47 PM
Subject: FW: Travel Times
[Intakes.xlsx](#)

David,

Angel said you were asking for these. These are travels times to each intake based on an estimate of the plume arriving at Durango at 3pm yesterday (another estimate). But, since this is from last night, the times will not be very accurate. We need an actual location and time to restart the calculations today, otherwise we are basing estimates on estimates.

Robert Kirkland

Physical Scientist (Environmental)

Surface Water Center Coordinator

USEPA Region 6, 6WQ-NI

kirkland.robert@epa.gov

214-665-6798

"Here be dragons" Unknown author. A phrase used to fill the whitespace on early maps.

From: Kirkland, Robert
Sent: Thursday, August 06, 2015 6:13 PM
To: Crossland, Ronnie; Garcia, David; Kosfisz, Angel; Taylor, Patricia-A; Brown, Jamesr; Restivo, Angela; McCasland, Mark
Subject: Travel Times

The travel times for the Spill are estimated using 4 mph in Green. The calculated travel times I used are twice the 4 mph estimate (slower than the 4 mph estimate).

Robert Kirkland

Physical Scientist (Environmental)

Surface Water Center Coordinator

USEPA Region 6, 6WQ-NI

kirkland.robert@epa.gov

214-665-6798

"Here be dragons" Unknown author. A phrase used to fill the whitespace on early maps.

From: Kirkland, Robert

Sent: Thursday, August 06, 2015 5:01 PM

To: Crossland, Ronnie; Garcia, David; Kosfiszer, Angel; Taylor, Patricia-A; Brown, Jamesr; Restivo, Angela; McCasland, Mark

Cc: Kosfiszer, Angel

Subject: Map of Intakes and Stream Gages

Here is the map of the intakes and gages on the Animas and San Juan. I will work up some travel times before I leave today, but NM or USGS may already have some idea. There is an application called ICWATERS co-developed by the EPA which should give a good estimate of concentration and instream flow time, but I do not currently have access to the software. HQ might be able to help in getting this if it is needed.

I will start working from home tomorrow about 6:30 am. My Cell number is Personal Phone/Ex. 6
Also Angel Kosfiszer will be in the Office to assist with this as well if needed.

Thanks!

Robert Kirkland

Physical Scientist (Environmental)

Surface Water Center Coordinator

USEPA Region 6, 6WQ-NI

kirkland.robert@epa.gov

214-665-6798

"Here be dragons" Unknown author. A phrase used to fill the whitespace on early maps.